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July 25, 2008

Ms. Virginia Lane
Federal Aviation Administration
Orlando Airports District Office
5950 Hazeltine National Drive
Orlando, FL 32822-5024

SUBJ: EPA NEPA Comments on FAA's FEIS for the "Development and Expansion of Runway 9R/27L and Other Associated Airport Projects at Fort Lauderdale-Hollywood International Airport" (FLL); Broward County, FL; CEQ #20080244; ERP #FAA-E51052-FL

Dear Ms. Lane:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced FAA Final Environmental Impact Statement (FEIS) on the proposed expansion of FLL in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. EPA has participated in FAA's scoping meeting and site visit on February 23, 2005, and provided follow-up scoping comments in a letter dated March 25, 2005. We have also provided NEPA comments on the Draft EIS (DEIS) in a letter dated May 17, 2007. EPA appreciates FAA's coordination with us during scoping and between the DEIS and FEIS.

The existing FLL footprint includes a 9,000-ft long by 150-ft wide primary "north" runway (9L/27R), a 5,276-ft long by 100-ft wide "south" runway (9R/27L), and an intersecting 6,930-ft long by 150-ft wide crosswind runway (13/31). Onsite expansion of these runways or construction of new ones presents several off-airport physical constraints adjacent to airport property. These include US 1 and the FEC Railroad (eastward); I-95, the CSX Railroad and Dania Cut-off Canal (westward); I-595 (northward); and residential areas (southward and westward).

FAA's Preferred Alternative

FAA's preferred alternative for the proposed FLL expansion is Alternative B1b, which is structurally the same as Broward County's (Sponsor) Proposed Project (B1c) identified in the DEIS, but without the operational mitigative measures that are currently in effect through Interlocal Agreements (flight tracks, etc.). B1b proposes to extend the south runway (9R/27L) eastward toward the Atlantic Ocean to a total of 8,000 ft in length (+2,724-ft extension) by 150 ft in width (+50-ft extension). This runway extension would require construction of a "runway/taxiway bridge" to span US 1 and the FEC Railroad. To provide adequate vertical clearance (34.74 ft minimum) over this

transportation corridor, the runway would need to be elevated 45 ft MSL on the east end (27L) and 8 ft MSL on the west end (9R). Because the runway would be inoperable during construction, a parallel taxiway just north of the south runway would serve as an interim runway. Various other project modifications are also proposed, including terminal redevelopment and decommissioning of the crosswind runway. The earliest expected implementation of B1b would be 2012, such that the analysis design years are 2012 and 2020. FAA and the Sponsor considered a full range of reasonable onsite alternatives in the EIS to expand the south runway ('B' alternatives), north runway ('C' alternatives) or a combination ('D' alternatives).

Air Quality Impacts

FLL is identified as one of the busiest U.S. airports, as a congested airport, and as one that is significant to national air transportation. Consistent with the "Vision 100" statute to streamline the review of such FAA-designated congested airports, FAA developed an FLL Steamlining Memorandum of Understanding (MOU) with EPA and other cooperating agencies to better coordinate the EIS review. From a project need perspective, the FLL expansion is to prevent lengthy aircraft departure delay times (predicted to reach an average of approximately 26 minutes in 2012/2020) and to maintain average delays at six minutes per operation (pg. ES-10). Such a reduction in aircraft queuing time would also save energy and reduce aircraft air emissions such as National Ambient Air Quality Standards (NAAQS) criteria pollutants, Hazardous Air Pollutants (HAP) and Greenhouse Gases (GHG). EPA supports this air quality improvement aspect of the FLL expansion, although continued increases in operations at FLL over time can be expected to diminish this environmentally beneficial aspect.

In addition to this reduction in aircraft emissions, EPA continues to recommend overall airport reductions in GHG through the various measures outlined in our DEIS comment letter (alternative fuels, ground support equipment, auxiliary power units, electrification, idling practices, diesel retrofits, cell phone waiting areas, energy conservation, etc.). Although we appreciate that a HAP inventory for airport sources was provided in this FEIS for FLL, we continue to recommend that screening level HAP risk evaluations be prepared in order to allow an informed comparison of the alternatives based on their respective potential impacts. It is recommended that such risk comparisons become part of FAA policy so that the alternative airport scenarios will be better evaluated. Also regarding air quality, our DEIS concern that the proposed project would result in a violation of the $PM_{2.5}$ NAAQS has been resolved. The project is predicted to be in compliance with all NAAQS for 2012 and 2020 design years.

Noise Exposure Impacts

Despite project air quality benefits, aircraft noise exposure to nearby residents remains an EPA concern. It is EPA's primary concern with the proposed FLL expansion and merits mitigation. Of primary concern is new and increased (as well as existing) noise exposure of residents within the 65+ DNL contours (as well as the 60 DNL contour)

located south and west of the south runway proposed for extension by the FAA preferred alternative B1b.

Affected Public

For 2012, noise exposure to residents within the 65 DNL by B1b were reported (pg. 6.C-23) to affect 652 residential housing units (371 single-family, 233 multi-family and 48 mobile home units) and 1,593 people (3 people in 1 unit within 70-75 DNL and 1,590 people in 651 units within 65-70 DNL). In addition, 8,297 people in 3,650 units would be located within the 60-65 DNL in 2012. Residential areas with an undetermined portion (no 2012 data found in the FEIS[1]) of these 8,297 people in the 60-65 DNL was presumably also considered incompatible land use by FAA since they constitute the outside adjacent portion (i.e., outside of the 65 DNL) of contiguous residential neighborhoods and subdivisions that are otherwise located within the 65 DNL. A portion (3,482 people) of these 8,297 people within the 60-65 DNL would also experience a significant noise elevation (+3.0 DNL or greater) in 2012 due to the implementation of B1b (pg. 6.C-53).

For 2020, the continued operation of B1b would affect a greater population. Data for 2020 (pg. 6.C-72) showed noise exposure of 1,051 residential dwelling units (571 single-family, 390 multi-family, and 90 mobile home units) and 2,472 people (127 people in 51 units within 70-75 DNL and 2,345 people in 1,000 units within 65-70 DNL). In addition, 9,749 people in 4,234 units would be located within the 60-65 DNL in 2020. Of these, residential areas with approximately 2,184 people in 1,023 units (527 single-family, 218 multi-family and 278 mobile home) were also considered incompatible land use by FAA since they constitute the outside adjacent portion (i.e., outside of the 65 DNL) of contiguous residential neighborhoods and subdivisions that are otherwise located within the 65 DNL (pg. 8-38). A portion (3,802 people) of these 9,749 people within the 60-65 DNL would also experience a significant noise elevation (+3.0 DNL or greater) in 2020 due to the implementation of B1b (pg. 6.C-103).

EPA's DEIS Noise Mitigation Recommendations

In our May 17, 2007, comment letter on the DEIS, EPA outlined our recommendations for noise mitigation. In addition to any safe and FAA-approved operational mitigation measures (flight tracks to minimize low residential overflights), we continue to recommend land use mitigation (primarily home acquisitions from willing sellers) in the following prioritized approach for FLL (excerpted from DEIS comment letter):

* Acquisition of all homes from willing sellers that are located within the 70+ DNL contours;
* Acquisition of all remaining homes from willing sellers that are located within the 65+ DNL contours and are significantly elevated (using the

[1] It is our understanding from FAA that such data were only calculated for 2020 (2,184 people) and not 2012, since FAA noise mitigation was based on the 2020 noise condition and it was assumed the 2012 noise exposures would be covered in the 2020 mitigation.

+1.5 DNL criterion);
* Acquisition of all remaining homes from willing sellers that are located within the 65+ DNL contours, or sound-proofing those homes at the option of the residents;
* Consideration of sound-proofing all homes at the option of the residents that are located within the 60 DNL contour and are significantly elevated (using the +3.0 DNL criterion).

FAA's Noise Mitigation Proposal

In the FEIS (Chapter 8.6.1), the Broward County Sponsor proposed "...seven noise mitigation principles for FAA to consider in the development of conceptual mitigation for the EIS" (pg. 8-23). These principles include property acquisition, soundproofing, avigation easements and other measures. FAA has selected four of these measures as "appropriate to address incompatible land uses within the 2020 65 DNL noise contour of the FAA's preferred alternative" (pg. 8-27). These mitigation measures are identified on page 8-28 and may be generalized as addressing: 1) neighborhoods/subdivisions as a whole to help ensure community cohesion, 2) acquisition of mobile homes and relocation of residents, 3) sound insulation of eligible single- and multi-family units with recommended avigation easements, and 4) purchase guarantee/sales assistance (with sound insulation and recommended avigation easements) for eligible single- and multi-family units. The FEIS also predicts the cost of implementing various measures based on the number of potentially eligible incompatible units within the 65 DNL (571 single-family, 390 multi-family and 90 mobile home units) and in those portions of the 60 DNL where contiguous neighborhoods cross the 65 DNL contour (pg. 8-38).

Regarding the procedures for implementing FAA's noise mitigation measures, page 8-27 states that (excerpted from FEIS):

> The FAA will identify those properties that may be eligible for participation in a land use mitigation measure. Broward County's responsibility is to decide how to apply the mitigation to eligible properties. The mitigation areas and the mitigation measures identified in this EIS will be part of the FAA Record of Decision. The Record of Decision will include conditions requiring the Airport Sponsor to implement the noise mitigation measures addressing the impacts resulting from the FAA's Preferred Alternative. The participation of the individual home owner and/or property owner in any of the recommended mitigation measures, however, will be voluntary.

EPA's Comments & Recommendations

We appreciate the progress that the Sponsor and FAA have made in the development of a noise mitigation plan and that FAA's four mitigation measures incorporate some of EPA's recommendations outlined above. Together with our noise mitigation recommendations, we believe that FAA's four noise mitigation measures is a workable

approach for completion of FAA's final mitigation plan. We offer the following comments on FAA's mitigation measures for B1b:

- Overall Commitment – A clearer commitment that FAA's four referenced mitigation measures (or modification thereof into the FAA final noise mitigation plan with FLL Streamlining MOU cooperating agency input) *will be implemented*, as opposed to these measures being termed "appropriate", the "FAA-recommended mitigation measures", or that "[m]itigation and other conditions established in this EIS, or during its review, are subsequently committed to by the FAA in its Record of Decision"). (Ref: pp. 8-27, ES-34, ES-32)

- 65+ DNL Specifics & Commitment – Eligibility and the specifics as to what mitigation is actually proposed for the 1,593 (2012) and 2,472 (2020) affected residents within the 65+ DNL were deferred until the ROD and should be clarified for all residences, by mitigation measure, in the ROD. (Ref: Tables 6.C.1-13 (pg.6.C-23) and 6.C.1-44 (pg. 6.C-72))

- Contiguous Neighborhoods Specifics & Commitment – Eligibility and the specifics as to what mitigation is actually proposed for those residents that live outside of but adjacent to the 65 DNL in contiguous neighborhoods and subdivisions that cross the 65 DNL (2,184 people for 2020) which presumably were also deferred to the ROD and should be clarified, by mitigation measure, for all residences in the ROD. (Ref: Table 8-8 (pg. 8-38))

- 60 DNL Significant Elevation Mitigation & Commitment – Mitigation for the 3,482 (2012) and 3,802 (2020) residents that live within the 60-65 DNL that are predicted to be significantly elevated by +3.0 DNL or greater due to the project was not addressed. We believe that such residents should be considered for suitable noise exposure mitigation such as home soundproofing. The ROD should clarify with specifics and a commitment. (Ref: Tables 6.C.1-31 (pg. 6.C.-53) and 6.C.1-66 (pg. 6.C-103))

Moreover, as suggested above and consistent with the FLL Streamlining MOU associated with this project, cooperating agency signatories such as EPA are asked for concurrence or non-concurrence at various decision points – including mitigation – during the development of the EIS. While FAA coordinated with us throughout the NEPA process, concurrence of a final noise mitigation plan has not yet occurred. This step should occur *before* the issuance of the ROD to help insure a coordinated noise mitigation plan. While NEPA only requires that mitigation be considered, EPA believes that the public disclosure process would be better served if noise mitigation specificity and commitments are included in the FEIS as well as in the ROD.

Given that mitigation specificity was deferred to the ROD, we continue to recommend closer consideration and implementation of our above DEIS noise mitigation approach together with the above four FAA mitigation measures identified in the FEIS during the FAA development of the ROD. We further recommend individual application of the

final noise mitigation plan to all affected residents within the 65+ DNL contours and the 60-65 DNL contour. Such specifics include enumeration – by mitigation measure – of the eligible residents inside and outside the 65 DNL to whom the FAA/Sponsor will offer home and/or property acquisition, soundproofing, avigation easements, and other mitigation measures (i.e., how many residences/residents inside and outside the 65 DNL will be targeted for acquisition, soundproofing, etc.). Procedurally, it is our understanding from FAA that implementation of the noise mitigation plan would start with residences within the highest contours (70 DNL). Also, FAA's mitigation for noise exposures is based on the 2020 noise condition as opposed to the 2012 condition. Since the number residents exposed to aircraft noise is greater for the 2020 condition, EPA agrees with this procedural approach unless there are some eligible residents in the 2012 condition that would not be covered by the 2020 condition and its mitigation.

For the benefit of the public, we also recommend that the ROD be made available to all affected parties and participants of the EIS process so that the finalized version of what the Sponsor and FAA intend to do to mitigate aircraft noise at FLL for the proposed expansion will be well distributed to the public. Moreover, we suggest that the Sponsor and/or FAA conduct follow-up meetings to further coordinate the final noise mitigation plan with the affected residents to accommodate their individual needs.

Also related to noise mitigation, we understand from Appendix P (Response 8.9) that "Broward County is currently conducting a 14 CFR Part 150 Study" and "[t]he Record of Approval for the 14 CFR Part 150 is not anticipated before the FAA issues its Record of Decision (ROD) on this EIS." EPA commends the Sponsor for conducting its Part 150 Study and FAA for its funding; however, we wish to emphasize that the noise mitigation for the present FLL expansion EIS should fully mitigate its noise exposure impacts and not depend on the Part 150 process for such noise mitigation. The Part 150 process is a voluntary process intended to mitigate residual noise impacts that were left unmitigated by previous projects or that accrued incrementally between projects. However, the NEPA and Part 150 processes should complement each other to mitigate both existing and proposed noise exposure impacts at FLL.

Wetland Impacts

In addition to noise exposure, B1b would impact wetlands. Mitigation for unavoidable wetland losses (15.41 ac) should continue to be coordinated with the U.S. Army Corps of Engineers (COE), EPA and other resource agencies. We appreciate that the Sponsor and FAA included the conceptual wetland mitigation plan as part of the FEIS. Based on our review, we recommend the conceptual wetland mitigation plan include in-kind mitigation to offset impacts to freshwater wetlands or justify why out-of-kind mitigation is appropriate. Furthermore, we recommend that the Sponsor coordinate with the EPA and the other regulatory resource agencies to finalize the total amount and type of mitigation credits which may be available at the West Lake Park Mitigation site.

Other Comments

EPA has also reviewed FAA's responses to our comments on the DEIS. A copy of our letter ("AC001") and FAA's responses to our comments (pg. P.1-1) are provided in Appendix P. Our comments on selected responses are provided in the enclosed *Detailed Comments*.

Summary

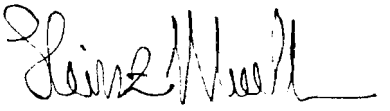
We appreciate the progress that the Sponsor and FAA have made in the development of a noise mitigation plan and that FAA's four mitigation measures identified in the FEIS incorporate some of EPA's recommendations outlined in EPA's NEPA comments on the DEIS. Together with our noise mitigation recommendations, we believe that the four noise mitigation measures that FAA finds "appropriate to address incompatible land uses within the 2020 65 DNL noise contour of the FAA's preferred alternative" is a workable approach for completion of FAA's final mitigation plan. However, specificity and commitments for the noise mitigation for residents living within and outside the 65 DNL were deferred to the FAA ROD. Cooperating agency concurrence with the mitigation plan, consistent with the FLL Streamlining MOU as a EIS concurrence point, was also deferred until after the FEIS, but should occur *before* the issuance of the ROD. Until a noise mitigation plan is finalized, EPA continues to have concerns about residents in nearby residential areas experiencing aircraft noise exposure due to the project.

EPA continues to recommend closer consideration and implementation of our DEIS noise mitigation approach together with the four identified FAA mitigation measures during the FAA development of the ROD. A clear mitigation plan should be developed in the ROD for all residents living within the 65 DNL contours as well as for those residents that may experience significant elevation within the 60-65 DNL. Specificity and commitments in the final noise mitigation plan of the ROD should include enumeration – by mitigation measure – of the eligible people living in residences inside and outside the 65 DNL to whom the FAA/Sponsor would offer home/property acquisition, soundproofing, avigation easements, and other mitigation measures. The priorities and timing of the mitigation should also be specified. We recommend that the ROD also be made available to all interested parties and the Sponsor and/or FAA should conduct follow-up public meetings to further coordinate the final noise mitigation plan with the affected residents to accommodate their individual needs. These EIS mitigative actions should complement – but be independent from – the Sponsor's ongoing Part 150 Study.

We appreciate FAA's coordination of this proposed project with us. Because of the noise mitigation specifics to be included in the ROD, we request a copy of the ROD for our files. Should you have overall questions on our comments, feel free to coordinate with Chris Hoberg of my staff at 404/562-9619 or hoberg.chris@epa.gov. Also, air quality issues may be directly addressed to Brenda Johnson of our Air, Pesticides and Toxics Management Division (APTMD: 404/562-9037 or johnson.brenda@epa.gov),

air toxics issues to Paul Wagner (APTMD: 404/562-9100 or wagner.paul@epa.gov), and wetland issues to Ron Miedema (South Florida Office: 561/616-8867 or miedema.ron@epa.gov).

Sincerely,



Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

Enclosure – *Detailed Comments*

DETAILED COMMENTS

EPA offers these remaining comments on the following selected FAA responses found in Appendix P of the FEIS.[2]

▸ FAA Response 4.3 (Touchdown Point) – EPA defers to FAA and the Sponsor regarding the touchdown point of the proposed runway as well as other aspects of airport safety. However, we do not suggest that the touchdown point (striped on the runway) be located directly over US 1 to minimize the startle effect of motorist (particularly tourist motorists new to the area) traveling through the proposed US 1 "tunnel" when aircraft are landing on the runway/taxiway bridge directly overhead. Even though Response 4.3 suggests that the touchdown point should appropriately be addressed in the project design phase, we believe this is too late since by then the length and configuration of the runway is already set in the ROD and the touchdown point is presumably a defined FAA standard distance from the end of the runway.

Our experience with the recent EIS for the fifth runway expansion of Hartsfield-Jackson Atlanta International Airport (ATL), which has a similar runway bridge over an interstate highway, was that the touchdown point was not directly over the highway. Instead, the touchdown point – and therefore most landings – occurred earlier such that aircraft had already landed and could roll across the runway bridge rather than land directly over the highway. This would seem less startling to motorists, especially if additional screening of the runway bridge from the highway perspective was provided. Locating the stress point of the touchdown on fill versus bridge portions of the runway would also be sound from an engineering standpoint.

▸ FAA Response 4.6 (RPZs) – Again, EPA defers to FAA and the Sponsor regarding airport safety. However, it is unclear how I-95 can be located within the Runway Protection Zone (RPZ) since it is an *elevated* highway. It is our understanding that RPZs are to be clear zones intended to "enhance the safety for aircraft operations" (pg. xii) for emergencies such as aircraft overshooting the end of the runway.

▸ FAA Response 7.3 (HAP) – We note that Chapter 6, Section 6.B (*Air Quality*), page 6.B-102 mid-paragraph, states that "[t]he NAAQS comparative assessment provides the analysis that translates the emission inventories into pollutant concentrations for comparison to the NAAQS." A similar approach is warranted to estimate the potential impacts from HAP. An emission inventory of HAP sources is a foundation. HAP emissions should be evaluated using dispersion modeling and toxicity values in a screening level assessment for locations in the vicinity of the airport. While we do not have national ambient air quality standards to serve as benchmarks for HAP, a screening

[2] EPA can appreciate the organizational problems associated with the voluminous comments received by FAA on the DEIS and the need to summarize or "bundle" similar comments for a streamlined response. However, the process of matching the responses to our numbered comments would have been more user-friendly if EPA (and any other commenters providing the same general comment) had been identified in the bundled comment.

level analysis can identify potential health risks that can be compared with acceptable risk ranges. EPA does not concur with FAA that "scientific uncertainties and lack of established standards and methodologies" justifies eliminating a screening level analysis from the information that should be presented in the FEIS.

▸ FAA Responses 7.4 & 7.15 (GHG) – These two FAA responses appear to be contradictory. That is, Response 7.4 states that "[a]lthough strategies to reduce emissions at the airport could be implemented as part of the Airport's overall environmental awareness plan, such a plan or strategies of a plan that could reduce emissions were not discussed in the EIS because the project already reduces emissions" and "[t]herefore, no plans to minimize or mitigate air quality impacts are necessary or required." In contrast, Response 7.15 states that "[t]he FAA is seeking more guidance from the U.S. Environmental Protection Agency (USEPA) on how to address greenhouse gas (GHG) emissions, particularly carbon dioxide emissions, at airports." EPA suggests that the proposed FLL expansion offers an excellent opportunity for further "greening" of the airport by reducing GHGs. EPA appreciates that – as also stated in Response 7.15 – some GHG reduction actions (coordination, studies, guidance, etc.) are ongoing within FAA.

For FLL, EPA continues to recommend the following actions excerpted from our DEIS comment letter of May 17, 2007. We recommend consideration of these programs and approaches that could be used to minimize or mitigate the air quality impacts from airport emissions (EPA Region 4 technical assistance is available through Dale Aspy at 404/562-9041 or aspy.dale@epa.gov):

* Electrification of all contact gates and ground support equipment (GSE), especially for terminal redevelopment;
* Use of auxiliary power units (APU) by aircraft at gates;
* Use of alternative fuels (such as compressed natural gas: CNG), electricity and diesel retrofits for airport shuttle buses and other on-airport vehicles;
* Use of reduced idling practices, cleaner fuels (such as biodiesel), and emission retrofits for diesel construction equipment used by FAA contractors;
* Use of more recent concepts such as "cell phone waiting areas" to minimize circling or idling traffic for passenger pick-ups;
* Use of other innovative approaches to avoid or minimize emissions from mobile and stationary sources associated with airports and its traffic;
* Promotion (e.g., airport practices and signage) of increased awareness of greenhouse gases (GHG) relative to their effects on climate change and their reduction through energy conservation, alternative fuels and biofuels use, and reduced vehicular mileage and fuel strategies.

▸ FAA Response 7.27 (HAP) – EPA does not concur that airport expansion alternatives cannot be evaluated in an EIS based on potential health effects. FAA's rationale for its position seems to be that a single source (or collection of sources such as an airport) would be difficult to evaluate at a local level given the many other sources that could affect a neighborhood. For the purposes of an EIS, the alternatives can be compared with

one another regardless of other sources that may exist. EPA offers advice on how to do such an evaluation in the Air Toxics Risk Assessment Reference Library which is available at http://www.epa.gov/ttn/fera/risk_atra_main.html.

▸ FAA Responses 8.1 & 8.2 (New Noise Exposures) – Response 8.1 indicates that new residents would be exposed to noise even by the No Action Alternative. EPA does not consider this relevant to the need for airport noise mitigation. That is, we believe the Sponsor and FAA are responsible for mitigating substantive aircraft noise exposures of residents within the 65+ DNL contours and for significant increases (as defined by the Federal Integrated Committee on Noise: FICON) within and outside the 65+ DNL contours. Mitigation should be addressed in response to proposed projects (NEPA documents) and periodically for substantive incremental increases between projects (Part 150 Program or other means). Also, while the noise information cited in Response 8.2 (Section 6.C.1) includes excellent documentation of the residences located in project noise exposure areas inside and outside the 65 DNL, it does not necessarily identify the requested enumeration of the *new* residences affected by noise (within the 65 DNL or significantly elevated within the 60 DNL) by the preferred alternative B1b (or those residences that would perhaps no longer be affected).

▸ FAA Response 8.6 (D1 & D2) – We appreciate that FAA has provided a full range of onsite alternatives. However, the fact that Alternatives D1 and D2 would not be fully constructed or operational by the 2012 design year makes their selection unlikely for a "Vision 100" project that emphasizes streamlined relief from long airport departure delay times. We nevertheless agree that these alternatives, which combine construction of both the north and south runways, should have been considered at some level within the NEPA document.

▸ FAA Response 8.8 & 8.10 (2020 Noise Data) – We much appreciate the addition of the requested 2020 noise data (Table 6.C.1-66: pg. 6.C-103) for significant elevations within the 60 and 65 DNL contours that were not presented in the DEIS. This table complements Table 6.C.1-31 for 2012 presented in the DEIS and the FEIS (pg. 6.C.-53). We note that these data show that in addition to some residences being significantly elevated (per the +1.5 DNL or greater FICON criterion) within the 65 DNL contours, some residences within the 60 DNL contour would also be significantly elevated (per the +3.0 DNL or greater FICON criterion). While those residences in the 65 DNL contours would presumably be mitigated, we believe that residents significantly elevated in the 60 DNL contour should also be considered for suitable noise exposure mitigation such as soundproofing.

▸ FAA Response 10.1 & 10.6 (Wetland mitigation) – We appreciate that the Conceptual Wetland Mitigation Plan is addressed in Appendix M.3 and look forward to reviewing and providing comments on the detailed mitigation plan when it becomes available.

▸ FAA Response 10.5 (Biscayne Aquifer) – This response does not specifically refer to the prevention of the contamination of the Biscayne Aquifer – a sole source aquifer – although compliance with NPDES permitting and the Stormwater Pollution Prevention

Plan (SWPPP) would certainly be beneficial to aquifer water quality. Other factors to consider would be the shallow depth of the Biscayne Aquifer in the Ft. Lauderdale area and the use of containment basins for any surface petroleum storage tanks or refueling stations. Also, as indicated in this response, we are aware that EPA authorized the NPDES program to the State of Florida; however, for completeness, the response should have also indicated that EPA retains federal oversight of the program.

▸ FAA Response 13.1 (EJ) – We appreciate that socioeconomics, children's health and EJ were addressed in Section 5.H.1.

* *EJ*: Page 5.H-5 compares the study area to Broward County, which was identified as the "reference population" used in the EJ analysis and was "...determined by FAA to be the appropriate unit of geographic area under analysis." We note that the minority and low-income populations compare well within these areas. However, although requested in our DEIS comments, additional comparison to adjacent counties and the State of Florida were not found. Such comparisons would have shown if Broward County represented a concentration of minorities or low-income populations, or if the demographics of Broward County was similar to neighboring Dade, Palm Beach, Hendry and Collier Counties (alternatively, smaller geographic units could be used such as U.S. Census (2000) Block Groups (BG) adjacent to the BG(s) incorporating the FLL 65 DNL contours). Accordingly, this information would have determined if FLL was an area with relatively comparable, elevated or reduced EJ populations within the region. As such, these demographics would have helped determine if the impacts of the proposed FLL expansion (e.g., noise exposure) would or would not be a potentially disproportionate impact in the region. Therefore, FAA should consider neighboring demographics in the development of its ROD and also provide an overall EJ conclusion, which is currently missing in Section 5.H.1.2.

* *Children's Health*: The FEIS indicates that the main concern for children statewide is asthma and respiratory diseases (ailments that are effected by air quality). Page 5.H-8 also states that "[w]hile this air quality analysis does not address a specific population, it is assumed that if *de minimis* thresholds are not exceeded there would be no significant adverse effect on children populations resulting from the implementation of the Airport Sponsor's Proposed Project or its alternatives." Since the *de minimis* levels of the NAAQS are not predicted to be exceeded, EPA notes that there should be no significant adverse effect on children health related to the six criteria pollutants (screening level HAP risk evaluations were not determined). The primary NAAQS set limits that are designed to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly.

However, despite the air quality considerations, page 5.H-8 does not consider the impacts of aircraft noise exposure on children's health. In future FAA EISs, this impact should be considered for major airport expansions or new construction projects. Based on our independent review, EPA notes that there appear to be no schools or noise sensitive public facilities frequented by children in the immediate project area. This information should have been captured or referenced in this section of the document.

* *Socioeconomics*: Page 5.H-5 briefly describes FAA Order 5050B, Airport Environmental Handbook and the social and economic impacts that were considered as part of this project. In addition, the FAA policy and the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act regarding fair compensation for residential and business displacement and related relocation assistance was also described. However, this section does not quantify residential or business relocations, or provide the demographic characteristics of those that will be displaced. Other issues, such as disruptions of established communities are also not discussed. If this information is located in other sections of the FEIS, it should be referenced in this section. If not, this information should be summarized in the ROD.

▸ FAA Responses 14.1 & 14.2 (Cumulative Impacts) – EPA appreciates that Chapter 7 was dedicated to cumulative impacts and was modified for the FEIS.

We note that certain FLL operational changes have already been approved by FAA in an Environmental Assessment/Finding of No Significant Impact (EA/FONSI) prepared concurrently with the present EIS (*Proposed Use of Runways 9R/27L and 13/31 When the Preferred Runway Cannot Efficiently Accommodate existing Operations at the Fort Lauderdale-Hollywood International Airport*). Although we acknowledged receipt of the document, EPA has deferred NEPA comments on the draft and final EA until this review of the FEIS for the FLL expansion.

To the extent feasible, EPA recommends that other airport actions occurring in a similar timeframe as an EIS project at the same airport should be lumped into one EIS so their impacts can be cumulatively considered. For dynamic airports like FLL, EIS actions may be frequent enough to allow this. However, when an EA action is necessary between EISs (e.g., it has independent utility or its implementation would be beneficial before the next airport EIS action) or has separate funding, the project and its EA should still be given adequate public review. Moreover, the direct/indirect impacts of such actions should also be summarized in subsequent NEPA documents in a cumulative impacts section (i.e., past, present and reasonably foreseeable project impacts on the same resources within the project area). EPA also believes that incremental increases in impacts (e.g., incremental noise increases and "creeping" expansion of noise contours over time) should periodically be assessed even if an airport project EA or EIS is not being proposed. Such incremental increases would also have a cumulative effect.

Among the numerous on-airport and off-airport projects documented in Chapter 7, we are pleased to note that page 7-15 documents the referenced EA/FONSI. The purpose of the operational modification was to already reduce congestion at FLL before the present FLL expansion project. The purpose of the EA/FONSI was to document potential impacts of this action. Since a FONSI was issued, FAA did not consider impacts significant. However, in the cumulative impacts analysis, a brief description of the positive or negative environmental impacts would have been appropriate for this project, as well as for the others similarly discussed.

More importantly, the focus of the cumulative impacts section should be to determine and document how the nearby past, present and foreseeable future projects (on-airport and off-airport) would affect (negatively or positively) relevant resources together with the proposed FLL expansion. The primary impacts of the proposed FLL expansion appear to be noise, air quality and wetlands such that the resources of primary concern would be the FLL noise environment, airshed, wetlands and perhaps others like Essential Fish Habitat (EFH). We therefore appreciate that Table 7.1 documents impacts of off-airport projects to wetlands and EFH and provides comments on mitigation. For air quality (pg. 7-21), the emphasis in the FEIS appeared to be on on-airport projects. Additional quantitative or qualitative discussion of off-airport sources or projects (e.g., emissions from Port Everglades cruise and container/tanker vessels, overall motor vehicular traffic, nearby power plants, etc.) relative to overall Broward County air quality would have been appropriate. For noise (pg. 7-22), on-airport projects were also emphasized, although off-airport projects were addressed by the conclusion that "...there were no noise impacts associated with the other projects disclosed in this chapter" (pg. 7-23). While it is certainly plausible that airport aircraft would generate most of the local noise and could essentially mask other sources (particularly during single-events like takeoffs), other important off-airport noise sources do exist locally. These include vehicular traffic, trains, cruise and container/tanker vessels, dredging and construction activities, and others. As such, most of the other off-airport projects discussed in Chapter 7 would have a noise component, although presumably less locally and regionally significant than the airport.

▸ FAA Response 22.2 (HAP) – There are a number of comments that EPA offered concerning the DEIS, that were identified in Appendix P of the FEIS with the number 22.2. Response number 22.2, on page P.22-1 of the FEIS, indicates that the text in the FEIS has been revised according to our comments. However, for some of these comments, the text was not changed in the FEIS. The ROD should address these.

▸ FAA Response 22.3 (Induced Impacts) – This response is to EPA's DEIS discussion that a lag time may exist between the induced impacts of the FLL expansion and supporting infrastructure (e.g., traffic intersection may not be upgraded immediately to accommodate additional airport-related traffic such that air quality could be reduced). However, EPA's comment was dismissed as an "opinion". While we realize that FAA may have little control over local traffic upgrades, this response could have been better addressed by referring to Broward County's economic impact study in Section 5.H.2 on *Secondary (Induced) Impacts*, or acknowledging that the FLL expansion could induce further local growth which in turn would have its own additional developmental impacts.